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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/362,982	07/30/1999	SHINICHI TANIGUCHI	003510-043	7542

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EXAMINER

SHERR, CRISTINA O

ART UNIT	PAPER NUMBER
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3621

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/362,982

Applicant(s)

SHINICHI TANIGUCHI

Examiner

Cristina O Sherr

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 16.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Applicant's Amendment filed 8 September 2003. Claims 1 and 8 have been amended. Claims 21-25 have been newly added. Claims 1-25 are pending in this case.

Response to Arguments

2. Applicant's arguments filed 8 September 2003 have been fully considered but they are not persuasive. Applicant argues with respect to claim 1 that the Hoshino does not disclose a relay means that relays encryption information to an IC card that includes encryption means that encrypts output information and decodes encrypted input information. Applicant's attention is directed to Hoshino et al (US 6,088,680A) at Col 3 In 6 – 67.

3. Applicant further argues with respect to claim 8 that Hoshino does not disclose first encryption means having a first electronic key, a second encryption means having a second electronic key and a third encryption means which communicates information using the first electronic key. Applicant's attention is directed to Hoshino et al (US 6,088,680A) at Col 5 In 56 – 67.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 – 7 and 10 – 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoshino et al (US 6,088,680A).

6. Regarding claim 1 –

Hoshino discloses a vehicle-mounted communication device comprising:

transmitting/receiving means provided for communication of information with road- side communication means located at a road side; and relay means for relaying encryption information received from the road side by said transmitting/receiving means to an IC card where the IC card includes storage means for storing user information regarding a balance of charges and encryption means that encrypts and outputs output information based on the user information and decodes encrypted input information regarding the user information (Col 3 ln 6 – col 6 ln 28).

7. Regarding claim 2 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, wherein said relay means relays the output information encrypted by the IC card to said transmitting/receiving means (Col 3 ln 6 – 20).

8. Regarding claim 3 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, further comprising encryption information storage means in which the encryption information is temporarily stored, wherein said transmitting/receiving means stores the encryption information in said encryption information storage means and transmits as is

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the encryption information stored in said encryption information storage means (Col 3 In 16 – 31).

9. Regarding claim 4 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (Col 3 In 28-40).

10. Regarding claim 5 –

Hoshino discloses a road-to-vehicle communication device comprising a vehicle-mounted communication device according to claim 1; and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col 3 In 35-50).

11. Regarding claim 6 –

Hoshino discloses a road-to-vehicle communication device according to claim 5, wherein road-side encryption means of said road-side control means installed at an entrance gate effects encryption of transmitted information and road-side encryption means of said road-side control means installed at a toll reception gate effects only decoding of received information (Col 4 In 6 – 12).

12. Regarding claim 7 –

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Hoshino discloses a road-to-vehicle communication device according to claim 5 wherein the transmitted information is accounting information regarding accounting processing of charged facilities (Col 4 In 16 – 22).

13. Regarding claim 10 –

Hoshino discloses a vehicle-mounted communication device according to claim 2, further comprising encryption information storage means in which the encryption information is temporarily stored, wherein said transmitting/receiving means stores the encryption information in said encryption information storage means and transmits as is the encryption information stored in said encryption information storage means (Col 3 In 6 – 19).

14. Regarding claim 11 –

Hoshino discloses a vehicle-mounted communication device according to claim 2, wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (Col 3 In 50-65).

15. Regarding claim 12 –

Hoshino discloses a vehicle-mounted communication device according to claim 3, wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (Col 5 In 6 – 18).

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16. Regarding claim 13 –

Hoshino discloses a road-to-vehicle communication device comprising: a vehicle-mounted communication device according to claim 2, and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col 5 In 28-45).

17. Regarding claim 14 –

Hoshino discloses a road-to-vehicle communication device comprising: a vehicle-mounted communication device according to claim 3, and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col 5 In 12-35).

18. Regarding claim 15 –

Hoshino discloses a road-to-vehicle communication device comprising: a vehicle-mounted communication device according to claim 4, and road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col 5 In 40-48).

19. Regarding claim 16 –

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Hoshino discloses a road-to-vehicle communication device according to claim 6, wherein the transmitted information is accounting information regarding accounting processing of charged facilities (Col 6 In 2-12).

20. Regarding claim 17 –

Hoshino discloses a vehicle-mounted communication device according to claim 10, wherein at least one of the IC card and the road-side communication means outputs a portion of the output information in a state without encryption and information display means for displaying the portion of the output information outputted without being encrypted is further provided (Col 5 In 43-55).

21. Regarding claim 18 –

Hoshino discloses a road-to-vehicle communication device comprising:
a vehicle-mounted communication device according to claim 17, and
road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with the vehicle-mounted communication device, and also including road-side encryption means for encrypting transmitted information and decoding received information (Col 4 In 56-65).

22. Regarding claim 19 –

Hoshino discloses a road-to-vehicle communication device according to claim 18 herein
road-side encryption means of said road-side control means installed at an entrance gate effects encryption of transmitted information and road-side encryption means of said road-side control means installed at a toll reception gate effects only decoding of received information (Col 6 In 12-19).

23. Regarding claim 20 –

Hoshino discloses a road-to-vehicle communication device according to claim 19, wherein the transmitted information is accounting information regarding accounting processing of charged facilities (Col 5 ln 32-45).

24. Regarding claim 21 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, wherein said relay means relays encryption information in an undecoded state (Col 5 ln 12-25).

25. Regarding claim 22 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, herein the vehicle-mounted communication device is not provided with encryption means for decoding encrypted information, wherein the encryption information is one of a) passing through the vehicle-mounted communication device in an undecoded state and b) is temporarily stored in the vehicle-mounted communication device in an undecoded state (Col 6 ln 19-28).

26. Regarding claim 23 –

Hoshino discloses a vehicle-mounted communication device according to claim 1, wherein an ID of the vehicle is stored in the vehicle-mounted communication device for corresponding the vehicle and the vehicle-mounted communication device, and a certified key code is stored in the IC card for corresponding the vehicle-mounted communication device and the IC card (col 5 ln 45-62).

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27. Claims 8 - 9 and 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoshino et al (US 6,088,680A).

28. Regarding claim 8 –

Hoshino discloses a road-to-vehicle communication device comprising: road-side control means being located at a road side, including road-side communication means provided for intercommunication of information with vehicle-mounted communication means, and first encryption means for encrypting transmitted information and decoding received information, with a first electronic key; information control means including information transfer means which stores therein user information regarding at least one of a vehicle and a user and through which information is mutually transferred with respect to the vehicle-mounted communication means, and second encryption means for encrypting output information and decoding input information, with a second electronic key; and vehicle-mounted control means being installed on a vehicle side, including vehicle-mounted communication means provided for intercommunication of information with respect to the road-side communication means and for mutual transfer of information with respect to said information control means, and third encryption means which, during the communication of information, encrypts transmitted information and decodes received information with the first electronic key, and which during the transfer of information, encrypts output information and decodes input information with the second electronic key (Col 3 ln 6 – col 6 ln 28).

29. Regarding claim 9 -

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Hoshino discloses a road-to-vehicle communication device according to claim 8, wherein each group of said first encryption means and the road-side communication means, said second encryption means and the information transfer means, and said third encryption means and the vehicle-mounted communication means are provided on the same substrate (Col 3 In 6 – 30).

30. Regarding claim 24 –

Hoshino discloses a road-to-vehicle communication device according to claim 8, wherein the second electronic key is different from the first electronic key (col3 In 30-45).

31. Regarding claim 25 –

Hoshino discloses a road-to-vehicle communication device according to claim 8, herein the first electronic key is stored in the road-side control means and the vehicle mounted control means, and the second electronic key is stored in the vehicle-mounted control means and the information control means (col 3 In 51-66).

32. Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may be applied as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
34. Hurta et al (US 5,602,919) discloses a speedup for monetary transactions using a transponder in conjunction with a smartcard.
35. Jesadanont (US 5,451,758A) discloses an automatic non-computer network no-stop collection of expressway tolls by magnetic cards and method.
36. Chaum et al (US 5,485,520A) discloses an automatic real-time highway toll collection from moving vehicles.
37. Shigenaga et al (US 5,554,984A) discloses an electronic traffic tariff reception system and vehicle identification apparatus.
38. Maeda et al (US 5,926,546A) discloses a communication device and system for mobile encrypted communication.
- 39. THIS ACTION IS MADE FINAL.**
40. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
41. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

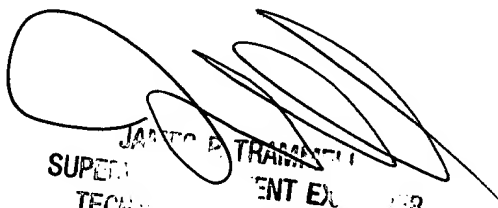
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

42. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cristina O Sherr whose telephone number is 703-305-0625. The examiner can normally be reached on Monday through Friday 8:30 to 5:00.

43. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 703-305-9768. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7687.

44. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


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